

REMARKS

The Pending Claims

Claims 1-27 are pending. Claims 1-10, 26 and 27 are under active consideration. Claims 11-25 are withdrawn from consideration. The pending claims are directed to prenyloxysulfonic acid compounds.

The Office Action

Claims 1-5 and 9-10 are rejected.

Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by Haugland et al. (U.S. Patent No. 5,132,432).

Claims 1-2, 5, 9 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Haugland.

Claims 1-5 and 9-10 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as their invention.

Statement of Substance of Interview

A telephone interview was conducted on November 22, 2006. Participating in the interview were Examiner Ebenezer Sackey of the United States Patent and Trademark Office and applicant's representative, Joel Silver. Discussed during the interview was the Restriction Requirement imposed between Group I (claims 1-5 and 8-10) and Group II (claims 6, 7 and new claims 26 and 27).

Applicant's representative contended that the compounds described in Group II were subgeneric to the compound of claim 1 (Group I) and should be grouped therewith. The Examiner agreed with applicant's contentions, permitting claims 6, 7, 26 and 27 to be regrouped with the claims of Group I. The restriction of Groups III-VI was maintained for reasons already on record. Accordingly, claims 1-10, 26 and 27 are currently pending and under active consideration. Claims 11-25 continue to be withdrawn from consideration.

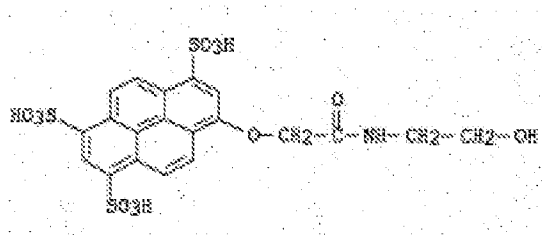
Applicant would like to sincerely thank Examiner Sackey for his time and efforts in discussing the issues presented in the Official Action.

RESPONSE TO REJECTIONS

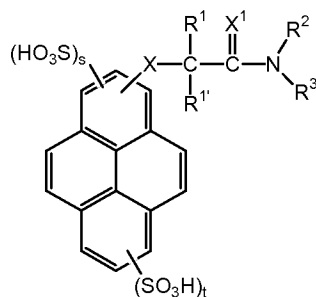
Rejection under 35 U.S.C. § 102(b)

Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by Haugland et al. (U.S. Patent No. 5,132,432). Applicants respectfully traverse this rejection.

According to the Office Action, Claim 1 is anticipated by the following compound cited to be present in Haugland:



Claim 1 provides a compound as shown:



with the proviso that, when R^2 is H, R^3 is a cyclic structure substituted with a member selected from a reactive group, a moiety comprising a reactive group and a component of a conjugate.

As the Examiner will recognize, while R^2 in Haugland's compound is H, R^3 is not a cyclic structure substituted with a member selected from a reactive group, a moiety comprising a reactive group and a component of a conjugate.

Accordingly, the compounds are different and the anticipation rejection should be withdrawn.

Rejection Under 35 U.S.C. § 103(a)

Claims 1-2, 5, 9 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Haugland. Applicants respectfully traverse this rejection.

According to the Office Action “Haugland et al. teaches a pyrene compound structurally similar to instantly claimed compound... The entire reference differ from ‘432’ in the generic description of the compounds and in having a C₁₋₆ alkyl group attached directly to the amino nitrogen, whereas ‘432’ teaches a hydrogen attached to said nitrogen. Note that hydrogen vs. methyl on nitrogen is not deemed a patentable difference absent a showing of unexpected results. See *Ex Parte Wetson*... Accordingly it would have been *prima facie* obvious to the skilled artisan at the time of filing this application to expect compounds claimed herein that are methylated on the aniline nitrogen to also possess the uses taught by the reference in view of the close structural similarity outlined above.” Applicants respectfully disagree.

Applicants first point out that other (non-alkyl) differences exist between Haugland’s compounds and those of the present claims. As described above, when R² is H in the present claims, R³ is a cyclic structure substituted with a member selected from a reactive group, a moiety comprising a reactive group and a component of a conjugate. Haugland does not describe compounds having this structural motif.

Applicants also point out that in order to support an obviousness rejection under 35 U.S.C. § 103, “all the claim limitations must be taught or suggested by the prior art.” M.P.E.P. § 2143.03. The Office Action fails to identify all of the limitations of the present claims. Accordingly, a *prima facie* case of obviousness has not been established.

Furthermore, the Office Action apparently argues that *Ex Parte Wetson* and similar cases have established a *per se* rule of obviousness, such as, where compounds only differ between H and alkyl. The Office is reminded that any inquiry under 35 U.S.C. § 103 is highly fact specific by design and as such there are no *per se* rules of patentability. *In re Ochiai* 71 F.3d 1565 (Fed. Cir. 1995). “*Per se* rules that eliminate the need for fact-specific analysis of claims and prior art may be administratively convenient for PTO examiners and the Board. Indeed they have been sanctioned by the Board as well. But reliance on *per se* rules of obviousness is legally incorrect and must cease.” *In re Ochiai* at 1572.

Furthermore, compounds encompassed by the present claims have significant technical advantages over the Haugland compounds, including a fluorophore having a

reactive group attached to the fluorescent nucleus of the fluorophore via a rigid linker arm, which is also water soluble, and highly fluorescent within a narrow wavelength range (see, paragraph 19 and Examples 1-16). A rigid fluorophore will generally exhibit motional correlation times that are enhanced relative to more flexible or sterically undemanding fluorophores, thereby enhancing the energy transfer between the fluorophore and another group (paragraph 17).

“Chemical cases should not be decided solely on the basis of homology or analogy in structural formulae. The determination of obviousness is not the mechanistic overlaying of chemical formulae to observe whether a difference greater than a methylene group or a chlorine atom exists. An unobvious property inherent in the claimed compounds is sufficient to overcome a showing of very close structural obviousness, and there is no basis in law for ignoring any property. Claims to chemical compounds are drawn to more than structural formulae. They define the compounds themselves and compounds possess properties which must be considered along with the formulae.” *In re Ruschig*, 52 C.C.P.A. 1238 (C.C.P.A., 1965).

In view of the fact that all of the elements of the present claims are not present in the cited art, and that the compounds of the present claims have significant unexpected advantages over the prior art compounds, it is respectfully submitted that the obviousness rejection is improper and should be withdrawn.

Rejection under 35 U.S.C. § 112, Second Paragraph:

Claims 1-5 and 9-10 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as their invention.

I. According to the Office Action, “[t]he use of the word “comprising” consistently in the claims render the claims [sic] because comprising is an open-ended word, which permit the inclusion of unrecited elements.” Applicants respectfully disagree.

A claim is only indefinite if it is "insolubly ambiguous and no narrowing construction can be properly adopted." *Amgen II*, 314 F.3d at 1342; *Honeywell*, 341 F.3d at 1338-39; *Amgen Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1218 (Fed. Cir.

1991); *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 453 (Fed. Cir. 1985). The use of the transitional phrase "comprising" is an entirely acceptable format and when viewed in the context of the entire claim, which is drawn to a particular pyrene scaffold with a particular set of substituents at selected positions; coupled with the versatility, diversity and exemplification of compounds in the specification it becomes overwhelmingly clear that the claims are in fact very well described and in no way indefinite as defined by 35 U.S.C. § 112.

Applicants respectfully point out that the U.S. Patent Office continually accepts claims to compounds such as "imidazopyridine amines" (see U.S. Patent Nos. 6,486,168 and 6,200,592) which have no limitations whatsoever as to the location and entity of R-groups contained thereon. Use of the term "comprising" when referring to a compound substituent is also commonly accepted (see U.S. Patent Nos. 6,987,116 and 7,138,090). A myriad of similar patents exist.

II. According to the Office Action, "the phrase "reactive group" is of indeterminable scope... First of all, there is no indication of what type of reactive groups are intended. Even if a specific group is intended, the phrase defines what it does rather than what it is. Functional language at the point of novelty, as herein employed by Applicants, is admonished in *University of California v. Eli Lilly*... The same remark [] applies to the nature of "ring substituted" and "photoactivatable group." Applicants respectfully disagree.

A claim is sufficiently definite "if one skilled in the art would understand the bounds of the claim when read in light of the specification." *Exxon Research and Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). A claim is only indefinite if it is "insolubly ambiguous and no narrowing construction can be properly adopted." *Amgen II*, 314 F.3d at 1342; *Honeywell*, 341 F.3d at 1338-39; *Amgen Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1218 (Fed. Cir. 1991); *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 453 (Fed. Cir. 1985).

The present claims are drawn to pyrene-substituted compounds of Formula I, with all of the associated R-group limitations. The claims are not drawn to reactive

groups, ring substituted groups or photoactivatable groups *per se*, as the Office Action seems to imply. The limitations involving reactive groups, solid supports and carrier molecules serve to further limit the claims. These groups are very clearly described in the specification. In particular, the specification lays out in detail exactly what each term refers to, how they are useful as substituents on the claimed compound and exemplary species in the group. Furthermore, the terms “reactive groups,” “ring substituted groups” and “photoactivatable groups” are well known to those skilled in the art and the definitions provided in the specification are not repugnant to those commonly accepted by skilled artisans. Accordingly, the specification/claims vastly exceed what is required under 35 U.S.C. § 112, second paragraph.

The Office Action has apparently missed a key point in the Lilly case, which involves functional language at the point of novelty. In that case and a more relevant chemical case (*University of Rochester v. G.D. Searle & Co.*, 358 F.3d 916 (Fed. Cir. 2004)), the claims did “not define any structural features commonly possessed by members of the genus that distinguish them from others.” Lilly at 1406. Such claims are known as “reach-through” claims. That is clearly a different situation from the present one, wherein the claims are directed to a compound of a particular structural formula, with specific R-groups at specific positions, wherein those R-groups have particular definitions that further limit the claims.

In view of the above Applicants respectfully request withdrawal of the present 112 rejection.

CONCLUSION

In view of the above remarks, it is submitted that this application is now ready for allowance. Early notice to this effect is solicited. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned agent at (541) 335-0165.

Respectfully submitted,

Date: November 22, 2006

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